



Launch Mission Execution Forecast

Mission: Falcon 9 GPS III-4

Issued: 27 Sep 20 /0830L (1230Z)

Valid: 29 Sep 20 / 2155 – 2211L (30/0155 – 0211Z)



Forecast Discussion: A pattern shift is beginning today as a frontal system is getting organized in the Mid-West. Added cloud cover is likely across Central Florida with another round of afternoon showers and thunderstorms. Tomorrow, the frontal system will be approaching the Florida Panhandle, turning winds more southerly along the Space Coast. This will keep the sea breeze from making it inland of the Spaceport before showers and thunderstorms develop. By Tuesday evening, the frontal boundary will be located in the Big Bend area of Florida. This will bring added moisture and instability into Central Florida with showers and isolated thunderstorms likely. The primary launch weather concerns for Tuesday evening's attempt will be these lingering clouds and unsettled weather from Tuesday afternoon's convection.

On Wednesday, the boundary should push through the area, clearing out the clouds. Winds will switch northwesterly and bring cooler air into the region. The primary weather concern for a Wednesday evening launch attempt will be the Thick Cloud Layer Rule, in the event the frontal cloudiness is slow to clear the Spaceport.

| Launch Day | Probability of Violating Weather Constraints | | | | | |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------|-----------|--------------------------|------------------------------------|
| | 50% | Primary Concerns: Cumulus Cloud Rule, Anvil Cloud Rules, Debris Cloud Rule | | | | |
| | Weather Conditions | | | | Additional Risk Criteria | |
| | Weather/Visibility: None / 7 mi. | Type | Coverage | Base (ft) | Tops (ft) | Upper-Level Wind Shear: Low |
| | Temp/Humidity: 79°F / 85% | Cumulus | Scattered | 3,000 | 10,000 | Booster Recovery Weather: Moderate |
| 24-Hour Delay | Liftoff Winds (200'): 180° 10 - 15 mph | Cirrostratus | Broken | 22,000 | 25,000 | Solar Activity: Low |
| | Probability of Violating Weather Constraints | | | | | |
| | 20% | Primary Concerns: Thick Cloud Layer Rule | | | | |
| | Weather Conditions | | | | Additional Risk Criteria | |
| | Weather/Visibility: Isold Showers / 7 mi. | Type | Coverage | Base (ft) | Tops (ft) | Upper-Level Wind Shear: Low |
| | Temp/Humidity: 75°F / 70% | Altostratus | Few | 12,000 | 14,000 | Booster Recovery Weather: Moderate |
| | Liftoff Winds (200'): 330° 12 - 17 mph | Cirrostratus | Scattered | 25,000 | 27,000 | Solar Activity: Low |
| | Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity. | | | | | |
| Next Forecast Will Be Issued | | 28 September 2020 | | | | |